

WHAT IS CLAIMED IS;

1. A security terminal system, comprising sampling means for sampling gases including the ambient air around a target object to be inspected, mass spectrometric means for analyzing the mass of the target gas to be inspected which has been sampled by said sampling means, communication means for sending and receiving information via a communication line, display means for displaying information, and control means for controlling said each means, wherein said control means outputs mass spectrometric data, which has been analyzed by said mass spectrometric means, to a communication line via said communication means, imports the determination result of a dangerous substance associated with said mass spectrometric data which has been received by said communication means via said communication line and then displays the result on said display means.

2. A security terminal system, comprising sampling means for sampling gases including the ambient air around a target object to be inspected, mass spectrometric means for analyzing the mass of the target gas to be inspected which has been sampled by said sampling means, determination means for determining whether or not a dangerous substance is present in the target gas and identifying the type of the substance, based on the mass spectrometric data which has been analyzed by said mass spectrometric means, communication means for sending and receiving information via a communication line, display

means for displaying information, and control means for controlling said each means, wherein when the determination result by said determination means indicates the presence of a dangerous substance, said control means issues a command to said mass spectrometric means to change analysis conditions and execute a mass spectrometric process, outputs the revised mass spectrometric data, which has been analyzed by said mass spectrometric means, to a communication line via said communication means, imports the determination result of a dangerous substance associated with said revised mass spectrometric data received by said communication means via said communication line and then displays the result on said display means.

15        3.      A security terminal system as claimed in Claim 1 or 2, further comprising a measuring device that measures the weight of said target object to be inspected, and an X-ray device that photographs an X-ray image of said target object,

20            wherein when the determination result by said determination means indicates the presence of a dangerous substance, said control means imports the weight and X-ray image of said target object from said measuring device and said X-ray device, sends them to a communication line via said communication means and then displays a guide to precautions against said dangerous substance, on said display means, which has been received by said communication means via said communication line.

4. A security support system, comprising  
determination means for determining whether or not a  
dangerous substance is present and identifying the type  
of the substance by collating mass spectrometric data of  
5 a mass spectrum with the reference data used for the  
determination of the dangerous substance, communication  
means for sending and receiving information via a  
communication line, and control means for controlling  
said each means,

10 wherein said control means inputs said mass  
spectrometric data received by said communication means  
into said determination means and then outputs the  
determination result which is output by said  
determination means to said communication line via said  
15 communication means.

5. A security support system, comprising first  
determination means for at least determining whether or  
not a dangerous substance is present by collating first  
mass spectrometric data of the target gas to be inspected  
20 with the first reference data used for the determination  
of the dangerous substance, second determination means  
for determining whether or not a dangerous substance is  
present and identifying the type of the substance by  
collating second mass spectrometric data of the target  
25 gas with the second reference data used for the  
determination of the dangerous substance, communication  
means for sending and receiving information via a  
communication line, and control means for controlling

said each means,

wherein said control means inputs first mass spectrometric data received by said communication means into said first determination means, and outputs the

5      first determination result which is output by said first determination means to said communication line via said communication means, and when said first determination result indicates the presence of a dangerous substance,  
6      said control means issues a command to change analysis  
7      conditions and measure second mass spectrometric data to  
8      a communication line via said communication means.

6.      A security support system as claimed in Claim 4 or 5, further comprising means for creating a guide to precautions against dangerous substances based on the  
10     weight and X-ray image of said dangerous substance, the type and shape of said dangerous substance and its storage vessel information which are received by said communication line via said communication means when the determination result indicates the presence of a  
15     dangerous substance,

20     wherein said control means outputs said precautions guide to said communication line via said communication means.

7.      A security system consisting of a terminal  
25     system and a support system being connected to each other via a communication line so that they can communicate with each other,

wherein said terminal system comprises sampling means

for sampling gases including the ambient air around a target object to be inspected, mass spectrometric means for analyzing the mass of the target gas to be inspected which has been sampled by said sampling means,

5 communication means for sending and receiving information via a communication line, display means for displaying information, and terminal system control means for controlling said each means,

10       said terminal system control means outputting mass spectrometric data analyzed by said mass spectrometric means to a communication line via said communication means, importing the determination result of a dangerous substance associated with said mass spectrometric data received by said communication means via said 15 communication line and then displaying the result on said display means; and

20       said support system comprises determination means for determining whether or not a dangerous substance is present and identifying the type of the substance by collating mass spectrometric data of a mass spectrum with the reference data used for the determination of the dangerous substance, communication means for sending and receiving information via a communication line, and support system control means for controlling said each 25 means,

      said support system control means inputting said mass spectrometric data received by said communication means into said determination means and then outputting the

determination result output by said determination means to said communication line via said communication means.

8. A security system consisting of a terminal system and a support system being connected to each other  
5 via a communication line so that they can communicate with each other,

wherein said terminal system comprises sampling means for sampling gases including the ambient air around a target object to be inspected, mass spectrometric means  
10 for analyzing the mass of the target gas to be inspected which has been sampled by said sampling means, first determination means for determining whether or not a dangerous substance is present in the target gas and identifying the type of the substance by collating first  
15 mass spectrometric data analyzed by said mass spectrometric means with first reference data used for the determination of the dangerous substance, communication means for sending and receiving information via a communication line, display means for displaying  
20 information, and terminal system control means for controlling said each means,

said terminal system control means issuing a command to said mass spectrometric means to change analysis conditions and execute second mass spectrometric process  
25 when the determination result by said first determination means indicates the presence of a dangerous substance, outputting second mass spectrometric data analyzed by said mass spectrometric means to a communication line via

5        said communication means, importing the determination  
result of the dangerous substance associated with said  
second mass spectrometric data received by said  
communication means via said communication line and then  
displaying the result on said display means; and

10      5        said support system comprises second determination  
means for determining whether or not a dangerous  
substance is present and identifying the type of the  
substance by collating said second mass spectrometric  
data with second reference data used for the  
determination of the dangerous substance, communication  
means for sending and receiving information via a  
communication line, and support system control means for  
controlling said each means,

15      10      5        said support system control means inputting said  
second mass spectrometric data received by said  
communication means into said second determination means  
and outputting the determination result output by said  
determination means to said communication line via said  
communication means.

20      15      9.        A security system consisting of a terminal  
system and a support system being connected to each other  
via a communication line so that they can communicate  
with each other,

25      20      wherein said terminal system comprises sampling means  
for sampling gases including the ambient air around a  
target object to be inspected, mass spectrometric means  
for analyzing the mass of the target gas to be inspected

which has been sampled by said sampling means,  
communication means for sending and receiving information  
via a communication line, display means for displaying  
information, and terminal system control means for  
controlling said each means,

5           said terminal system control means outputting first  
mass spectrometric data analyzed by said mass  
spectrometric means to a communication line via said  
communication means, importing the determination result

10          of the dangerous substance associated with said first  
mass spectrometric data received by said communication  
means via said communication line and displaying the  
result on said display means, and issuing a command to  
said mass spectrometric means to change analysis

15          conditions and execute second mass spectrometric process  
when said determination result indicates the presence of  
a dangerous substance, then outputting second mass  
spectrometric data analyzed by said mass spectrometric  
means to a communication line via said communication

20          means, importing the determination result of the  
dangerous substance associated with said second mass  
spectrometric data received by said communication means  
via said communication line and then displaying the  
result on said display means; and

25          said support system comprises first determination  
means for at least determining whether or not a dangerous  
substance is present by collating first mass  
spectrometric data of the target gas to be inspected with

the first reference data used for the determination of  
the dangerous substance, second determination means for  
determining whether or not a dangerous substance is  
present and identifying the type of the substance by

5      collating second mass spectrometric data of the target  
gas with the second reference data used for the  
determination of the dangerous substance, communication  
means for sending and receiving information via a  
communication line, and support system control means for  
10     controlling said each means,

15     said support system control means inputting first  
mass spectrometric data received by said communication  
means into said first determination means, outputting the  
first determination result output by said first  
determination means to said communication line via said  
communication means, and then issuing a command to change  
analysis conditions and measure second mass spectrometric  
data to a communication line via said communication means  
when said first determination result indicates the  
20     presence of a dangerous substance.

10. A security system as claimed in any one of  
Claims 7 through 9, wherein

25     said terminal system further comprises a measuring  
device that measures the weight of said target object to  
be inspected, and an X-ray device that photographs an X-  
ray image of said target object,

      said terminal system control means, when the  
determination result by said determination means

indicates the presence of a dangerous substance,  
importing the weight and X-ray image of said target  
object from said measuring device and said X-ray device,  
sending them to a communication line via said

5       communication means and then displaying a guide to  
precautions against said dangerous substance, on said  
display means, which has been received by said  
communication means via said communication line; and

6               said support system further comprises means for  
7       10      creating a guide to precautions against dangerous  
8      substances based on the weight and X-ray image of said  
9      dangerous substance, the type and shape of said dangerous  
10     substance and its storage vessel information received by  
11     said communication line via said communication means when  
12     the determination result indicates the presence of a  
13     dangerous substance,

14               said support system control means outputting said  
15     precautions guide to said communication line via said  
16     communication means.

17       11. A method of security service business wherein a  
18     terminal system equipped with mass spectrometric means is  
19     installed in an inspection area and a support system for  
20     determining whether or not a dangerous substance is  
21     present and identifying the type of the substance based  
22     on the mass spectrometric data on the target element  
23     which is measured by said mass spectrometric means is  
24     installed in an office at a security service enterprise;  
25     said terminal system and said support system being

connected to each other via a communication line so that they can communicate with each other, and said support system sending the determination result the dangerous substance to said terminal system via said communication network.

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12. A method of security service business as claimed in Claim 11, wherein said support system sends billing data for determination cost together with said determination result to said terminal system.

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13. A method of security service business which provides a user with mass spectrometric means for analyzing the mass of the target element to be inspected either at the user's expense or free of charge, receives, via a communication line, mass spectrometric data which has been analyzed by said mass spectrometric means, collates the received data with the reference data related to dangerous substances, and then sends the checked results to said user.

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